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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/645,011	08/23/2000	Jeremy T. Johnson	19675-04521	1910

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EXAMINER

COULTER, KENNETH R

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 07/19/2004

4

Please find below and/or attached an Office communication concerning this application or proceeding.



Office Action Summary

Application No.

09/645,011

Applicant(s)

JOHNSON ET AL.

Examiner

Kenneth R Coulter

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 7-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-6 and 18-25 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/7/00</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1 – 6 and 18 - 25, drawn to network routing based upon routing information, classified in class 709, subclass 238.
 - II. Claims 7 - 17, drawn to network routing data updating, classified in class 709, subclass 242.

2. The inventions are distinct, each from the other because of the following reasons:
Inventions Group I and Group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention Group I has separate utility such as routing data based upon routing information; Group II has separate utility such as the creation and distribution of routing information (FEC table information) in a network. See MPEP § 806.05(d).

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper

4. During a telephone conversation with Brian Hoffman on June 21, 2004 a provisional election was made with traverse to prosecute the invention of Group II, claims 7 - 17. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1 – 6 and 18 - 25 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

6. The disclosure is objected to because of the following informalities:

"intermediate node **214**" (p. 11, line 23) is mislabeled.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 7, 8, and 11 - 17 are rejected under 35 U.S.C. 102(e) as being disclosed by Lee et al. (U.S. Pat. No. 6,728,777) (Method for Engineering Paths for Multicast Traffic).

8.1 Regarding claim 7, Lee discloses a network having a headend and a tailend (ingress and egress), a method of sharing bandwidth on the network among **one or more** internet service providers (ISPs) coupled to the tailend, the network receiving data packets from the end-users coupled to the headend and associated with the particular ones of the **one or more** ISPs, the method comprising the steps of:

creating a forwarding equivalency class (FEC) for each of the one or more ISPs coupled to the tailend (col. 9, lines 33 – 44 “The TE mechanism allows Internet service providers (ISPs) to define particular FECs for their network”).

passing the label for each FEC to the headend (col. 5, lines 13 - 19);

storing a label for each FEC in an FEC table at the headend (col. 5, lines 32 - 42);

receiving, at the headend, a data packet from an end-user (col. 3, lines 15 - 23);

determining the ISP associated with the end-user (col. 9, lines 33 - 44); and

routing the data packet through the tailend to the ISP associated with the end-user using the label stored in the FEC table for the FEC of the ISP (Fig. 1; col. 9, lines 33 - 44).

8.2 Per claim 8, Lee teaches that the network comprises an intermediate node between the tailend and the headend and further comprising the steps of:

receiving, at the intermediate node, the label and FEC from the tailend (Fig. 5; col. 7, lines 9 - 19);

building an intermediate FEC table at the intermediate node storing the label and the FEC received from the tailend (Fig. 5; col. 7, lines 9 - 19);

storing an upstream label for the FEC in the intermediate FEC table (Fig. 5; col. 7, lines 9 - 19); and

passing the upstream label and the FEC from the intermediate node to the headend (Fig. 5; col. 7, lines 9 - 19).

8.4 Per claims 11, 12, and 13, Lee teaches that the step of storing the label for each FEC in the FEC table comprises the step of verifying that a better path for the FEC does not exist by

arbitrating between similar FECs (col. 5, lines 32 - 42; col. 6, lines 45 - 61); and

arbitrating between similar labels (col. 5, lines 32 - 42; col. 6, lines 45 - 61); or

selecting among multiple paths associated with an FEC using a path-choosing metric (col. 5, lines 32 - 42; col. 6, lines 45 - 61).

8.5 Regarding claim 14, Lee discloses that the routing step comprises the step of pushing the label stored in the FEC table for the FEC for the ISP onto the data packet (col. 5, lines 13 - 19).

8.6 Per claims 15, 16, and 17, Lee teaches accounting for an amount of data passed to the ISP associated with the end-user, wherein the accounting step comprises:

accounting for an amount of data passing through the tailend to each of the **one or more** ISPs coupled to the tailend (col. 6, lines 45 – 61); or

accounting for an amount of data received at the headend destined for each of the **one or more** ISPs coupled to the tailend (col. 6, lines 45 – 61).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee as applied to claim 7 above, and further in view of Aggarwal et al. (U.S. Pat. No. 6,330,614).

10.1 Regarding claims 9 and 10, Lee does not explicitly disclose that the determining step comprises the step of determining an autonomous system number (ASN) of the ISP associated with the end-user; and looking up the ASN in the FEC table to determine the label.

However, ASN information is commonly used for routing in order to uniquely identify a node; and the ASN information can be located in header information in MPLS systems as seen in Aggarwal (Abstract).

Lee discloses that each node has a unique identifier in order to route information (col. 2, lines 16 - 17).

Therefore, it would be obvious to one of ordinary skill in the art to implement ASN information in Lee since ASN information is a node identification means to route the packets.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth R Coulter whose telephone number is 703 305-8447. The examiner can normally be reached on 5 4 9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 703 305-4003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

krc

KENNETH R. COULTER
PRIMARY EXAMINER
